What is the Multiplication Rule?

For Independent Events:
For Dependent Events:
Puzzles: Draw 2 cards with replacement. What's the chance of getting two red cards?
Draw 2 cards without replacement. What's the chance of getting two red cards?
Find the probability of correctly answering the first 5 questions on a multiple-choice test if random guesses are made and each question has 4 possible answers?
The following questions pertain to flipping a fair coin. What is the chance of getting 3 tails? What is the chance of getting this particular sequence HTH?